

# THE EVOLUTION OF THE NATURAL PROTECTED AREAS NETWORK IN ROMANIA

SORIN GEACU\*, MONICA DUMITRAȘCU\*, IURIE MAXIM\*\*

*Key-words:* nature protection, protected areas, Natura 2000, Romania.

The paper is aiming to present a historical overview of the Romanian protected areas network starting with the earliest initiatives on nature conservation and the establishment of first natural reserves in 1932. The authors have identified several stages in the dynamics of natural protected areas which, over the last two decades, have doubled in number and grew in surface up to eight times. Currently, Romania natural protected areas totalizes up to 1,798,782 ha, thus representing 7.55% of the national territory. According to IUCN they frame into the following categories: national parks (13), natural parks (15), biosphere reserves (3), scientific reserves (79), natural monuments (230) and nature reserves (661). Additionally, in 2007 national network "Natura 2000" was created as part of the European Ecological Network. At present, Natura 2000 in Romania includes 408 Sites of Community Importance and 148 Special Protection Areas, with a total area of 74,494,000 hectares.

## INTRODUCTION

The present network of protected natural areas includes numerous and valuable "samples" of various natural ecosystems. In Romania they have started to cluster into a common organized and legalized manner in the Interwar period.

## DOCUMENTATION FROM BEFORE WORLD WAR I (WWI)

In the first year of issue of Forests Magazine ("Revista Pădurilor") – 1881 – Petre Antonescu stated that Letea and Caraorman forests were worthy of a "*European significance*." The proposal to put them under protection comes nine years after setting up the first national park in the world: Yellowstone in U.S.A. (1872).

Iuliu Römer is credited with the responsibility of making up a list of protected sites in Țara Bârsei which was annexed to the "Law regarding the protection of natural and historic monuments" from 1908 in the former Hapsburg Empire (Morariu, 1971). From among these, we would mention: the spring at the foot of the Spreng Hill, Tâmpa Mountain, the "milk stone" cave in Postăvaru Mountain etc.

In 1909 with the initiative of I. Tuzson the complex fencing and protection of an area rich in *Polygala sibirica* near Cenad (Alba County) was succeeded (Borza, 1924). In 1912, as part of the 26th General Assembly of the Society "Forestry progress" ("Progresul Silvic") in Bucharest, its president Ion Kalinderu mentioned "the need for legal dispositions to the protection of landscapes".

The Tourism Society in Romania [Old Kingdom n.n.] in its Yearbook of 1911 stated that "*in 1912 we will intrude to those entitled to keep some of our mountains, by stopping grazing activities and transforming them slowly into natural parks*" (p. 123). In 1916, Alexandru Borza in the newspaper called "Unirea" that was edited in Blaj and then the booklet "Din lumea Plantelor" printed

\* Senior researcher, Institute of Geography, Romanian Academy, Dimitrie Racoviță Str., no. 12, 023993, Bucharest, Romania; [geacusrin@yahoo.com](mailto:geacusrin@yahoo.com); [stefania\\_dumitrascu@yahoo.com](mailto:stefania_dumitrascu@yahoo.com).

\*\* PhD student, Institute of Geography, Romanian Academy, Dimitrie Racoviță Str., no. 12, 023993, Bucharest, Romania; [iurie@yahoo.com](mailto:iurie@yahoo.com).

in Arad in 1917, drew attention to the Retezat Mountains and the valleys of Făgăraș Mountains as “*places destined to be turned into national parks*” (Borza, 1924, page 12).

#### ACHIEVEMENTS BETWEEN 1919 AND 1944

On August 12, 1919 Professor V. Stanciu from the University of Cluj won, during the Grand National Assembly in Sibiu, the right to render exempt to expropriation of “*any areas of particular scientific interest*”.

The Director of the Botanical Garden in Cluj, Professor Borza managed in 1919 to obtain the temporary protection for 15 “*places*” of botanical interest. The following year, with the intervention of the Naturalists’ Society of Romania, a sector of the Letea forest in the Danube Delta was placed under protection, a forest ecosystem since then considered “*of extreme interest for geography, botany and geology*”, as stated in the First Congress of the Naturalists’ Society held in Cluj, Romania between April 18<sup>th</sup> and April 21<sup>st</sup>, 1928.

Also in 1920, in a memorandum, the Faculty of Science, University of Cluj put forward to the national fora the establishment of Parâng and Someș Cald Springs National Parks (Borza, 1924).

In 1921 Bosanci, Pohorlăuți, Boianceni reserves were planned in Bucovina (Gușuleac, 1921), and in 1923 the Ministry of Domains decided that 480 ha of forest were to be placed under protection in Slătioara forest (Câmpulung County).

Borza (1924) stated that “*there is a need to interfere quickly to maintain the primitive grandeur of some pieces of nature, protect them from the bad and destructive influence of human society; thus arises the need to create a well-thought program for the preservation of scientific natural treasures, which can now be found in abundance, but are doomed to disappear in the future, or are even destroyed in part*” (p. 8).

Moreover, after the World War I, the scientist Emil Racoviță was concerned about the establishment of protected areas as extensive as possible, with an “eternal” aspect in mind (Popova-Cucu, Muică, 1983). At that time, King Ferdinand I of Romania, who was also a passionate naturalist, proposed the placing under protection of the linden forest area near Niculițel in Northern Dobrogea.

In the 1920’s M. Haret, the founder of the Turing-Club of Romania managed “*to obtain from the state a secular spruce forest on Mount Cocora to be turned into the first natural park in Romania*” stated Borza in 1930 (p. 101). The area was 8 ha wide and he hoped to add to it the region of the Ialomicioara cave, as well (Borza, 1924).

The Touristic Society “The Traveler’s Inn” (“Hanul Drumeților”) founded on the 15<sup>th</sup> of March 1921 carried out an intensive propaganda for the creation of natural parks in Bucegi, Piatra Craiului, Parâng and Retezat Mountains, as well as for the protection of Letea forest.

Therewith, the Royal House of Romania wanted to turn “*the upper part of the Bucegi Mountains, into a huge National Park*” (Borza, 1924, page 16). In 1930 the first law to protect natural monuments was passed (Borza, 1942).

The first natural reserves in Romania were endorsed by the Journals of the Council of Ministers (no. 1148 and 1149) in 1932. These were: Domogled Forest (Severin County), Copărșaie hayfields (Cluj County), Cluj hayfields (Cluj County), Suatu (Cluj County), Moinești-Zau (Turda County), Bâile Episcopești Oradea (Bihor County), Pietrele Roșii Tulgheș (Ciuc County), Bâlea valley (Sibiu county), Pietrosu Mare Borșa (Maramureș County), Parâng Mountains (Hunedoara County), Boianceni hayfields (Cernăuți County), Pohorlăuți hayfields (Cernăuți County), Ponoare-Bosanci hayfields (Suceava County), Frumoasa-Bosanci hayfields (Suceava County) Rogojești Meadow (Dorohoi County) and Mociar-Gurghiu Forest (Mureș County).

The first Romanian national park, Retezat, was firstly established (with a surface of 100 km<sup>2</sup>) by the Journal of the Ministers Council no. 593 of March 22, 1935.

The scientist E. Racoviță was due with the first handbook of principles of classification, organization and regulation of natural reserves (1937) that had to be judiciously chosen, well-guarded and managed. Racoviță considered:

- a) reserves of stations when it comes to designating geographical entities, territories, landscapes;
- b) geographical and geological formations protected from a scientific and touristic interest;
- c) plant and animal species or individuals protected as natural monuments;
- d) mineral, paleontological and prehistoric. He believed that “*geographical reserves (or stations) are preferable to the protection of isolated species.*”

#### THE SITUATION IN 1940–1944

During this period, Romania divided into 71 counties of which 28 included protected areas (39.4%), whose entire surface area reached almost 14,000 ha, of which 10,000 ha belonged to the Retezat National Park and 3,996 ha to other reserves.

From the country's area at the time, the share of natural protected areas was only 0.047%. The largest areas were: Căpriana forest (1,220 ha Lăpușna County), the forest on Mount Domogled (900 ha, Severin County) and Piatra Craiului Mountains (400 ha).

Three of the natural reserves didn't have their surface specified in the official documents: Pietrosu Mare (Rodna Mountains), Parâng Mountains and Detunata Goală (Apuseni Mountains).

It is worth mentioning that the reserves officially recognized in the Interwar period in Bessarabia – then part of Romania – were the first protected areas in the Republic of Moldova's present territory. Thus, in 1937 the following reserves were established: Capriana and Pârjolteni in Lăpușna County, Cărbuna, Delacheu, Moghilău, and Gârbovăț in Tighina County, Valea Mare in Bălți County, Hârjauca-Palanca and Cocorozeni in Orhei County (Lepș, 1937).

Other protected natural areas instated in Interwar Romania are in today's Ukraine (3 reservations established in 1932 in Cernăuți County, another one in 1937 in Hotin County, as well as Insula Șerpilor (Snake Island) protected area since in 1934) and Bulgaria (Caliacra and Balcic, legalized in 1934 and 1939, respectively).

We would remind that Insula Șerpilor (now in Ukraine) in the Black Sea was a protected area “*as a whole, except the lighthouse and garden*”, its area summing up to 17 hectares (Călinescu, 1931).

Between 1932 and 1943 Retezat National Park and 48 reserves were established (Anonimus, 1943).

Overall, at the beginning of 1944, the total protected natural areas sum up to about 11,500 ha, the situation varying among the following counties:

- Alba, Arad, Bălți, Brașov, Caraș, Câmpulung, Dorohoi, Hotin, Severin, Sibiu, Tecuci and Timiș had one protected area each;
- Constanța, Hunedoara, Lăpușna, Orhei, Prahova, Suceava had two protected areas each;
- Cernăuți and Tulcea counties had three protected areas each;
- and Tighina and Turda counties had four protected areas each.

#### THE 1945–1999 PERIOD

In 1945 the present territory of Romania housed only Retezat National Park and 39 nature reserves. After two decades there were 130 nature reserves of a total area of about 75,000 ha (Pop, Sălăgeanu, 1965).

Some protected areas have been declared by the issuing of the Council of Ministers Decisions (no. 458/1954, 1625/1955 and 485/1964).

The Law no. 9/1973 on Environmental Protection classifies protected areas in national parks and nature reservations, the latter belonging to several categories: botany, forestry, zoology, geology, limnology, paleontological, speleology and mixed.

Forest Research Institute in Bucharest developed, by 1977, the necessary studies for the establishment of 13 national parks that the Natural Monuments Committee of the Romanian Academy has used to prepare the draft law on nature protection, law which never came to pass due to decisional factors at the time (Popescu *et al.*, 2004).

At the Fourth International Session of the Man-Biosphere Programme (Paris, 1979), a proposal was made to the effect of having the Retezat National Park and the Pietrosu Mare (Rodna Mountains) and Roșca-Letea (Danube Delta) declared biosphere reserves. The proposal was accepted on January 10, 1980 by UNESCO (Bălteanu *et al.*, 2006).

In 1973 Soran noted that "*the most effective method to preserve the genetic funds of ecosystems is at the moment, and especially in the future, the creation of large complex reserves*" (p. 44). In 1989, protected areas made up barely 0.36% of the country (Stoiculescu, Bândiu, 1991, page 194).

By the Order of the Minister of Waters, Forestry and Environment no. 7 of 27 January 1990, 13 national parks were established: Rodna, Călimani, Ceahlău, Bicaz-Hășmaș, Bucegi, Piatra Craiului, Cozia, Retezat Domogled-Cerna Valley, Semenic-Caraș Gorge, Nera-Beușnița Gorge, Apuseni Mountains and the Danube Delta (Buza *et al.*, 2005).

In the year 1991, in Romania there were 586 protected natural areas established through different normative acts as follows: 42 by the Journals of the Council of Ministers, 41 by Decisions of the Council of Ministers, 8 by Government Decisions, 5 by Minister's Orders and 490 by local decisions (Toniuc *et al.*, 1992). Among them there were 15 parks, to the ones established in 1990, Grădiștea Muncelului-Cioclovina and Portile de Fier were added.

In 1991, some counties had numerous protected areas and others only some. In the first case Bihor with 55, Gorj with 42, Mehedinți with 31, Hunedoara with 30, Harghita with 30 were included, and in the latter case the counties of: Dâmbovița – three protected areas, and Buzău, Covasna, Ialomița and Ilfov with 2 protected areas each.

The Environmental Protection Law of 1995 stated in Article 54 that "*for the conservation of natural habitats, of biodiversity which defines the country's biogeographic pattern as well as the natural structures and of an environmental, scientific and picturesque value, the maintenance and development of the national network of protected areas is to be maintained and developed*", while the following article includes a paragraph specifying that "*the central authority for environmental protection following the proposal of the Romanian Academy declares new areas for the expansion of the national network of protected areas*".

## THE SITUATION IN 2000

Law no. 5 of March 6<sup>th</sup> 2000 regarding the national territory planning, section III – protected areas, has given this status to 17 biosphere reserves, natural and national parks, namely to those that already existed in 1991 and two more: Măcin Mountains and Small Wetland of Brăila. Therewith, there were also 827 nature reserves spread according to national provinces as follows: in Transylvania-275 (33.2%), 137 in Moldova (16.6%), 121 in Oltenia (14.6%), 75 in Crișana (9.1%), 68 in Wallachia (8.2%), 61 in Banat (7.4%), 51 in Dobrogea (6.2%) and 39 in Maramureș (4.7%). Divided by counties, the situation was as follows (Fig. 1):

- The majority of natural protected areas were found in the counties: Alba (83), Bihor (60), Caraș-Severin (47), Hunedoara (42), Gorj (36), Harghita (36), Maramureș (33) and Mehedinți (32);
- The fewest were located in the counties: Olt (6), Prahova (6), Satu Mare (6), Giurgiu (4), Brăila (2), Ilfov (2), Călărași (1) and Covasna (1);
- The counties with no natural protected areas were: Ialomița and Teleorman counties.

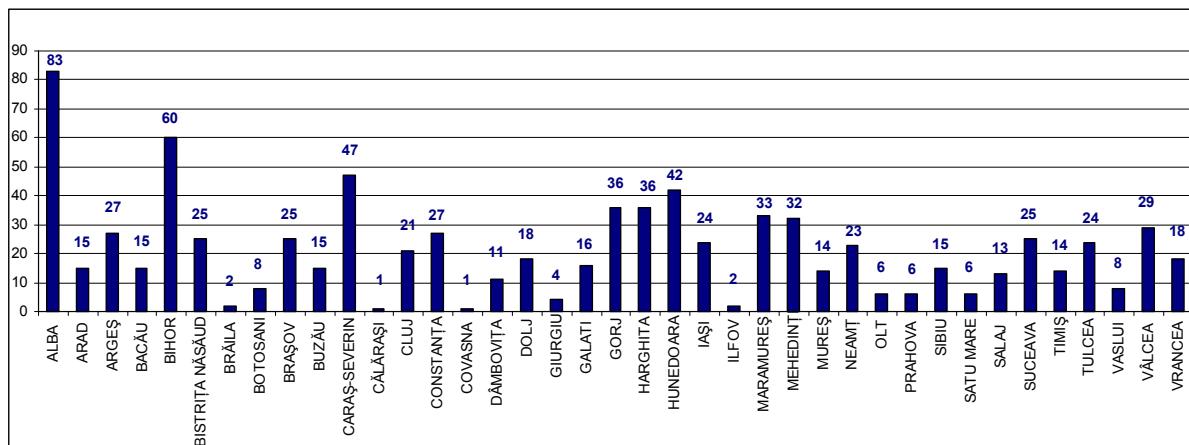


Fig. 1 – The number of natural protected areas  
by county according to Law no. 5/2000.

The largest nature reserves were the following: The Mureş Gorge (the Bradului-Răstoliţa Meadow and Topliţa-Deda making up a total 13 733 ha, Mureş County), Vânători-Neamţ (11,500 ha, Neamţ County) and Vâlsan Valley (10,000 ha, Argeş County).

The smallest natural heritage protected areas were located in four counties: Călăraşi (75.2 ha), Sălaj (86.3 ha), Ilfov (110 ha) and Bacău (201 ha).

#### DEVELOPMENTS AFTER THE YEAR 2000

An increased surface of protected areas was a priority of Romania's over the accession to the European Union. Thus, a series of decisions were taken by the Romanian Government during 2004–2010 (No. 2151/2004, 1581/2005, 1143/2007, 1066/2010 and 1217/2010) that led to the extension of the number of protected areas (Fig. 2, 3). Thus, up to now, Romania has:

- 998 protected areas of national interest;
- 79 scientific reserves – I;
- 13 national parks – II;

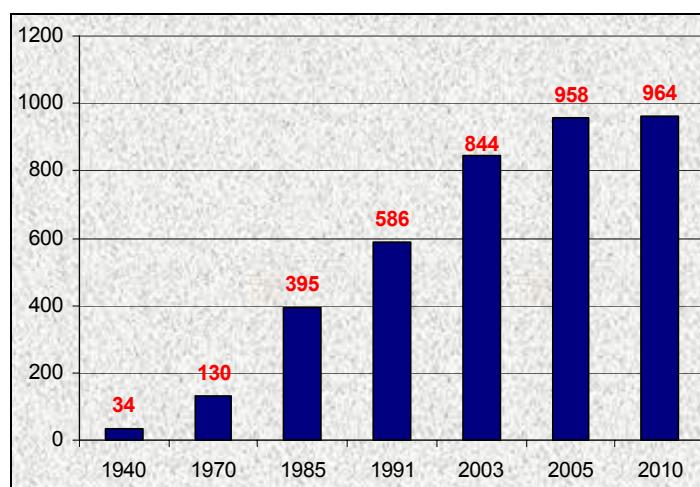


Fig. 2 – The dynamics of natural protected areas number.

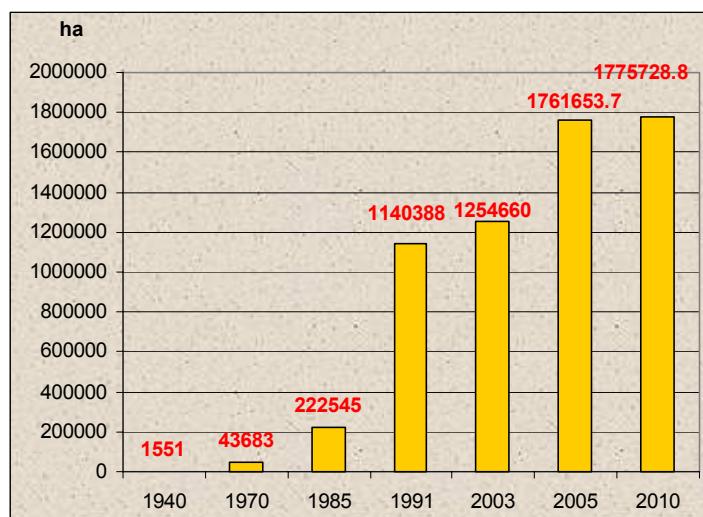


Fig. 3 – The dynamics of natural protected areas surface.

- 230 natural monuments – III;
- 661 natural reserves – IV;
- 15 parks – V.

At the international level Romania has:

- 3 Biosphere Reserves: Danube Delta (1991), Retezat Mountains (1979), Pietrosul Rodnei (1979);
- 5 Ramsar sites: Danube Delta (1991), Small Wetland of Brăila (2001), The Mureş Meadow (2006), Dumbărăviţa Fishery Complex (2006), Techirghiol Lake (2006);
- a World Heritage Site: Danube Delta.

#### NATURA 2000

Natura 2000 is an ecological network of protected areas in the European Union that aims to maintain a favorable conservation status a selection of the most important habitat types and species in Europe.

It is the main instrument of European Union for nature conservation in the Member States. Natura 2000 network consists of: *Special Areas of Conservation*, established under the Habitats Directive (Directive 92/43 of 1992 on the conservation of Natural Habitats and of Wild Fauna and Flora) and *Special Protection Areas* – established under the Birds Directive (Directive 79/409 of 1979 on the Conservation of Wild Birds).

In the Romanian legislation the two Directives have been transposed by Law no. 462/2001 (approving the Government Emergency Ordinance no. 236/2000 on the regime of protected natural habitats, wild flora and fauna). Through its high biodiversity value, Romania brings a significant contribution to the European Ecological Network. The declaration and recognition of European Natura 2000 areas in Romania is still an ongoing process having its deadline in 2016.

The establishment of Natura 2000 network in Romania underwent two stages, so far. In the first stage 273 Sites of Community Importance (by Order of Ministry no. 1964/2007) and 108 Special Protection Areas (by Government no. 1284/2007) were declared. In 2011 the network was extended to 408 SCI ( $39,952 \text{ km}^2$ ) (Fig. 4) and 148 SPAs ( $35,542 \text{ km}^2$ ) (Fig. 5) through the Order of Ministry Environment and Forests no. 2.387/2011 and the Government Decision no. 971/2011, respectively.

Through these regulations the total area of Natura 2000 areas in Romania reached the  $54,067 \text{ km}^2$ , which represents 22.68% of the national territory.

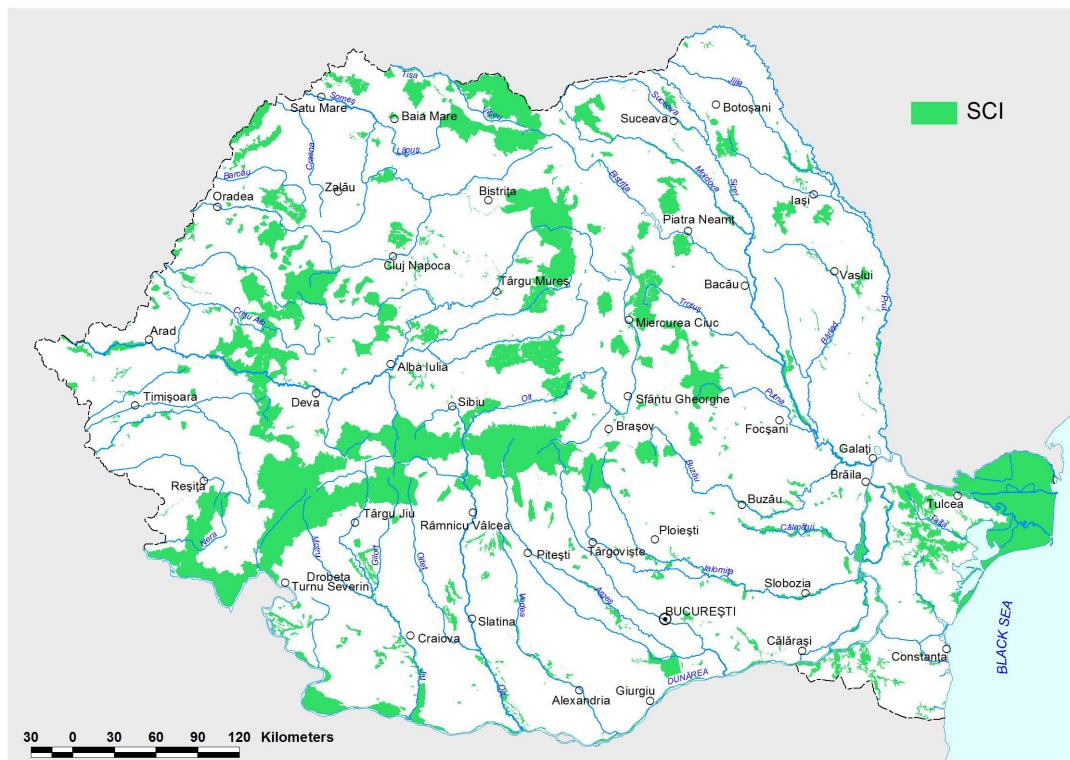


Fig. 4 – Sites of Community Importance.

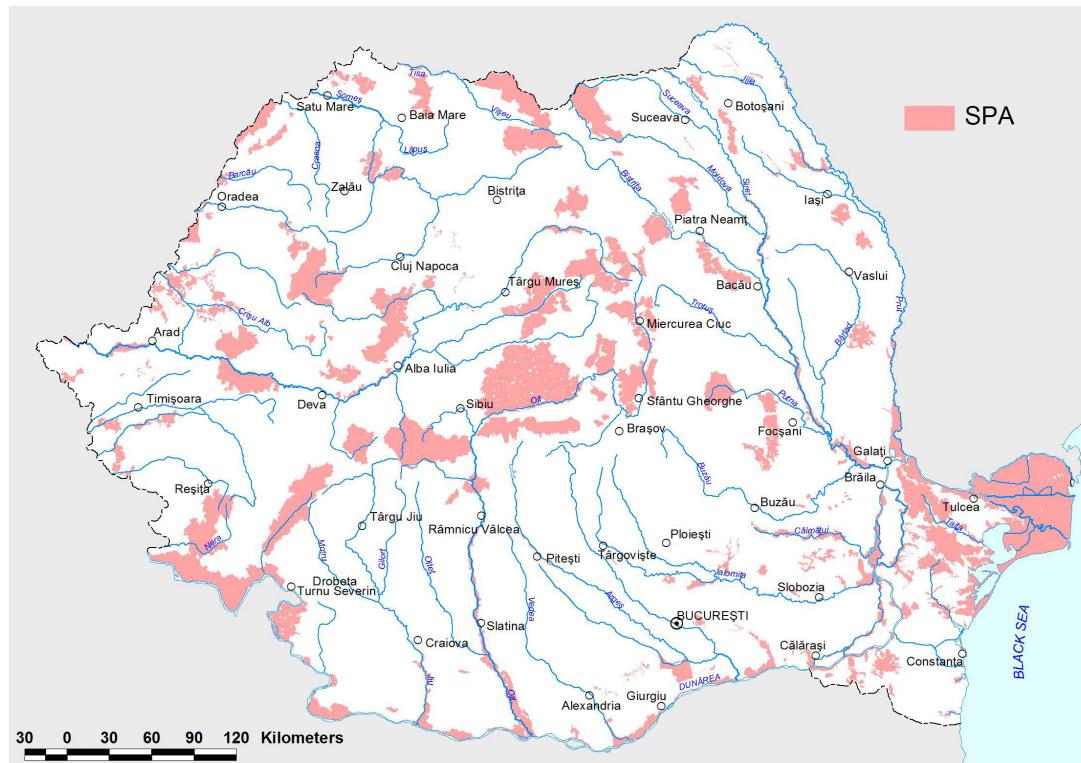


Fig. 5 – Special Protection Areas.

## CONCLUSIONS

Under the global environmental changes and climate change, the role of protected areas in conserving biodiversity and landscape becomes increasingly important. Under the given circumstances, the growing surface of protected areas, creating corridors link between them and reducing human impact are just some of the needs for ensuring an adequate management.

Therefore, the environmental policies must be made in connection with the agricultural, energy, transport policies having as starting point the principles of sustainability restated by the Rio +20 Summit. In addition to the involvement in the decision-making process by creating an adequate legal protection of biodiversity can not be achieved without the support of the private sector and local communities.

**Acknowledgements:** The elaboration of this paper was made under the research theme 2.1. *Geographical study of natural protected areas in Romania* of Research Plan of the Institute of Geography of the Romanian Academy.

## REFERENCES

- Anonim (1943), *Tabloul monumentelor naturale din România decretate până la data de 1 ianuarie 1944*, Buletinul Comisiunii Monumentelor Naturii, **XI**, 1–4, București.
- Antonescu, P. (1881), *Pădurea Letea și Cara-Orman*, Revista Pădurilor, **7**, București.
- Bălteanu, D., Dumitrașcu, Monica, Ciupitu, D., Geacu, S. (2006), *Protected natural areas*, in vol. “Romania. Space. Society. Environment”, The Publishing House of the Romanian Academy, București.
- Bălteanu, D., Dumitrașcu, Monica, Ciupitu, D., Maxim, I. (2008), *România. Ariile naturale protejate*, hartă 1:750000, Edit. CDPress, București
- Borza, A. (1924), *Protecția naturii în România*, Buletinul de informații al Grădinii Botanice și al Muzeului Botanic de la Universitatea de Cluj, **IV**, 1, Cluj
- Borza, A. (1930), *Problema protecției naturii în România*, Întâiul Congres Național al Naturaliștilor din România, Edit. Societății de Științe, Cluj.
- Borza, A. (1942), *Le ricchezze naturali della Romania e la loro protezione*, Lucrările Institutului de Geografie al Universității “Regele Ferdinand I” din Cluj la Timișoara, **VII**, Timișoara.
- Buza, M., Geacu, S., Dumitrașcu, Monica (2005), *Die Nationalparks in Rumänien im Kontext der EU-Erweiterung. Ein Überblick*, Europa Regional, **13**, 3, Leipzig.
- Călinescu, R. (1931), *Insula Serpilor. Schiță Monografică*, Analele Dobrogei, **XII**, Cernăuți.
- Gușuleac, M. (1921), *Fânațele seculare din Bucovina și conservarea lor ca monumente naturale*, Cernăuți.
- Lepș, I. (1937), *Ocrotirea monumentelor naturii din Basarabia*, Buletinul Muzeului Regional al Basarabiei, **8**, Chișinău.
- Morariu, I. (1971), *Preliminarii*, în vol. “Ce ocrotim în natura județului Brașov”, Brașov.
- Pop, E., Sălăgeanu, N. (1965), *Monumente ale naturii din România*, Edit. Meridiane, București.
- Popescu, Gh., Pătrășcoiu, N., Georgescu, V. (2004), *Ariile protejate din fondul forestier în România*, în vol. “Pădurea și omul”, Edit. Nord-Carta, Suceava.
- Popova-Cucu, Ana, Muică, Cristina (1983), *Ocrotirea naturii*, in vol. “Geografia României”, **I**, Edit. Academiei R.S. România, București.
- Racoviță, E. (1937), *Les Monuments Naturels. Définition, Classification, Normes pour l'application des lois et règlements. Ce qu'il faudrait faire et ce qu'il faudrait ne point faire. Essais d'exposé sommaire*, Société de Biogéographie, **5**, Paris.
- Soran, V. (1973), *Genofondul și problema ocrotirii lui*, Studii și Comunicări de Ocrotirea Naturii, **3**, Suceava.
- Stoiculescu, C., Bândiu, C. (1991), *Perspective dobrogene în conservarea naturii*, Ecologie și Protecția Mediului, **8**, Constanța.
- Toniuc, N., Oltean, M., Romanca, G., Zamfir, Manuela (1992), *List of protected areas in Romania*, Ocrotirea Naturii și a Mediului Înconjurător, **36**, 1, București.
- \* \* \* (1911), *Anuarul Societății Turistice din România*, **IX**, București.
- \* \* \* (1973), *Legea nr. 9 privind protecția mediului înconjurător*, București.
- \* \* \* (1995), *Legea nr. 137 a protecției mediului*, București.

- \* \* \* (2000), *Legea nr. 5 din 6 martie 2000 privind aprobarea planului de amenajare a teritoriului național, secțiunea III – zone protejate*, București.
- \* \* \* (2004), *Hotărâre nr. 2151/2004 privind instituirea regimului de arie naturală protejată pentru noi zone*.
- \* \* \* (2005), *Hotărârea Guvernului nr. 1581/2005 privind instituirea regimului de arie naturală protejată pentru noi zone*.
- \* \* \* (2007), *Hotărârea Guvernului nr. 1143/2007 privind instituirea de noi arii naturale protejate*.
- \* \* \* (2010), *Hotărârea Guvernului nr. 1066 /2010 privind instituirea regimului de arie naturală protejată asupra unor zone din Rezervația Biosferei Delta Dunării și încadrarea acestora în categoria rezervațiilor științifice*.
- \* \* \* (2010), *Hotărârea Guvernului nr. 1217 /2010 privind instituirea regimului de arie naturală protejată pentru Parcul Natural Cefa*.
- \* \* \* (2011), *Ordinul Ministrului Mediului și Pădurilor nr. 2387/2011 pentru modificarea Ordinului Ministrului Mediului și Dezvoltării Durabile nr. 1964/2007 privind instituirea regimului de arie naturală protejată a siturilor de importanță comunitară, ca parte integrantă a rețelei ecologice europene Natura 2000 în România*.
- \* \* \* (2011), *Hotărârea Guvernului nr. 971 din 2011 pentru modificarea și completarea Hotărârea Guvernului nr. 1284/2007 privind declararea ariilor de protecție specială avifaunistică ca parte integrantă a rețelei ecologice europene Natura 2000 în România*.

Received April 23, 2012

